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10/761,319	01/22/2004	Howard E. Rhodes	M4065.0107/P107-F	2671
24998	7590	09/26/2008	EXAMINER	
DICKSTEIN SHAPIRO LLP			CHEN, CHIA WEI A	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

ADVISORY ACTION

Response to Arguments

1. Applicant's arguments filed 8/15/2008 have been fully considered but they are not persuasive.

Applicant argues with respect to claims 70-120 that the nonstatutory obviousness-type double patenting over claims 36-79 of Rhodes (US 6,310,366) is ambiguous and unclear.

The Examiner admits the typographical error. The rejection should be corrected to read: claims 70-79 of the instant application are rejected on the ground of nonstatutory obviousness-type double patenting rejection as being unpatentable over claims 36-45 of Rhodes. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant application claims are broader in every aspect than the patent claim and is therefore and obvious variant thereof. Since the typographical is readily apparent, as the Applicant admits that there are only 45 claims in Rhodes ('366), the nonstatutory obviousness-type double patenting over claims 36-45 of Rhodes ('366) is sustained. Furthermore, the rejections over the prior art are sustained, and the finality of the Office Action mailed May 16, 2008 is not withdrawn.

Applicant argues with respect to claims 120-130 of the instant application are not obvious in view of Rhodes (US 6,310,366) and Fossum (US 5,471,515).

However, claim 120, U.S. Patent No. 6,310,366 claim 20 discloses an imager comprising:

an array of pixel sensor cells formed in a retrograde well in a substrate, the retrograde well being doped with a vertically graded dopant concentration, wherein each of said pixel sensor cells is separated by an isolation region that electrically isolates said pixel cells from each other, and each said pixel sensor cell comprising comprises:

a photoconversion device;

but is silent regarding:

a reset transistor;

a source follower transistor;

a row select transistor; and

a floating diffusion region in electrical communication with said photoconversion device and said source follower transistor.

Fossum teaches a reset transistor (45); a source follower transistor (55); a row select transistor (60); and a floating diffusion region (40) in electrical communication with said photoconversion device and said source follower transistor (Fig. 1; col. 3, lines 7-21).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the Active Pixel Sensor structure of Fossum with the imager of U.S. Patent 6,310,366 to form an imager that consumes less power and has less image lag than a typical CMOS imager.

Applicant argues with respect to independent claims 70 and 120 that the guard ring 220 of Clark is incompatible with the doping profile of Mundt's well.

However, Examiner asserts that the guard ring 220 of Clark has no negative bearing on the functionality of the combination of Clark and Mundt. Clark discloses a doped well region 206 but is silent regarding the doping profile. Mundt discloses a retrograde vertically doped well 52N (or 52P) for a particular well region. These well regions are a distinct structure from the guard ring 220 of Clark. There is no suggestion in the references that a retrograde vertical doped well region 52N (or 52P) of Mundt cannot be used with the guard ring 220 of Clark. The retrograde vertically doped well of Mundt is applied to the well region 206 of Clark, and does not interfere with the functionality or structure of the guard ring 220 of Clark.

Applicant argues with respect to independent claims 70 and 120 that there is no motivation to combine the references of Clark and Mundt since the combination would further complicate the ultimate device and would further complicate fabrication of the device.

However, the opinion that the combination would further complicate the ultimate device and fabrication of the device is irrelevant to the motivation of the combination. What is relevant to the motivation is that the combination would have been obvious to a person having ordinary skill in the art at the time of invention. Both the Clark and Mundt devices are directed to solve the problem of reducing noise. It would have been obvious to a person having ordinary skill in the art at the time of invention to have used

both methods to solve the problem of reducing noise and preventing carriers from diffusing into the photosensor.

In light of the above arguments, the rejections of the claims are sustained.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHIA-WEI A. CHEN whose telephone number is (571)270-1707. The examiner can normally be reached on Monday - Friday, 7:30 - 17:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NgocYen Vu can be reached on (571) 272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Chia-Wei A Chen/
Examiner, Art Unit 2622
09/19/2008

*/Ngoc-Yen T. VU/
Supervisory Patent Examiner, Art Unit 2622*